DRONE SENIOR LEVEL

Enhancing Farming with Agricultural Drones:

Monitoring Crops: Drones fly over fields to check crop health, identify pests, and estimate yields, helping farmers make better decisions about watering, fertilizing, and pest control.

Precision Mapping: They create detailed maps of farmland, analyze soil conditions, monitor irrigation, and plan the best planting patterns.

Spraying: Drones can spray pesticides or fertilizers accurately, reducing waste and improving efficiency, especially in difficult-to-reach areas.

Problem Statement:

With the increasing use of drones in agriculture, it is crucial for the younger generation to understand the real-life challenges of drone operation. To address this, we provide a platform for the competition where participants navigate a drone through a sample arena, showcasing their piloting skills.

PRELIMINARY LEVEL

Video Submission:

- Submit a video or timelapse video (max 2 minutes) showcasing drone control skills (take-off, landing, forward, backward, left, right, 360 rotation).
- In the video, participants should mention their names, college name, and location, along with the drone specifications.
- Upload the video to a specified platform (e.g., YouTube, Google Drive) and share the link for review.

Drone Specifications:

- Only specified drone types are allowed, with a maximum size of 50cm x 60cm (including wings/propellers). (Refer the rules and regulations document for approved drones).
- The video link should be sent via email to bharatteckleague@gmail.com.

ZONAL LEVEL

Drone Approval:

- Drones must be brought to the competition which is showcased in the video of preliminary level. (Refer the rules and regulations document for approved drones)

Competition:

- In the zonal round, teams will participate hands-on. Each team will control and fly their drone through an arena, avoiding various obstacles, and must complete 2 laps.

Lap Completion:

- Teams with 2 members will complete 2 laps with the same pilot and co-pilot. Teams with 4 members will switch the pilot and co-pilot for the 2nd lap.

Performance Judging:

- Teams are evaluated based on their precision, skill in navigating obstacles, and completion time. Faster and more accurate teams will score higher.

FINAL LEVEL

Drone Approval:

- Drones must be brought to the competition which are used in Zonal level.

Competition:

- Participants must attach neodymium magnets to their drones. An object with a magnet will be placed in the middle of the arena.
- Participants must fly their drones through obstacles to reach the object.
- Using the magnets, participants must lift and carry the object, which weighs between 10 grams to 20 grams, to the finish line.

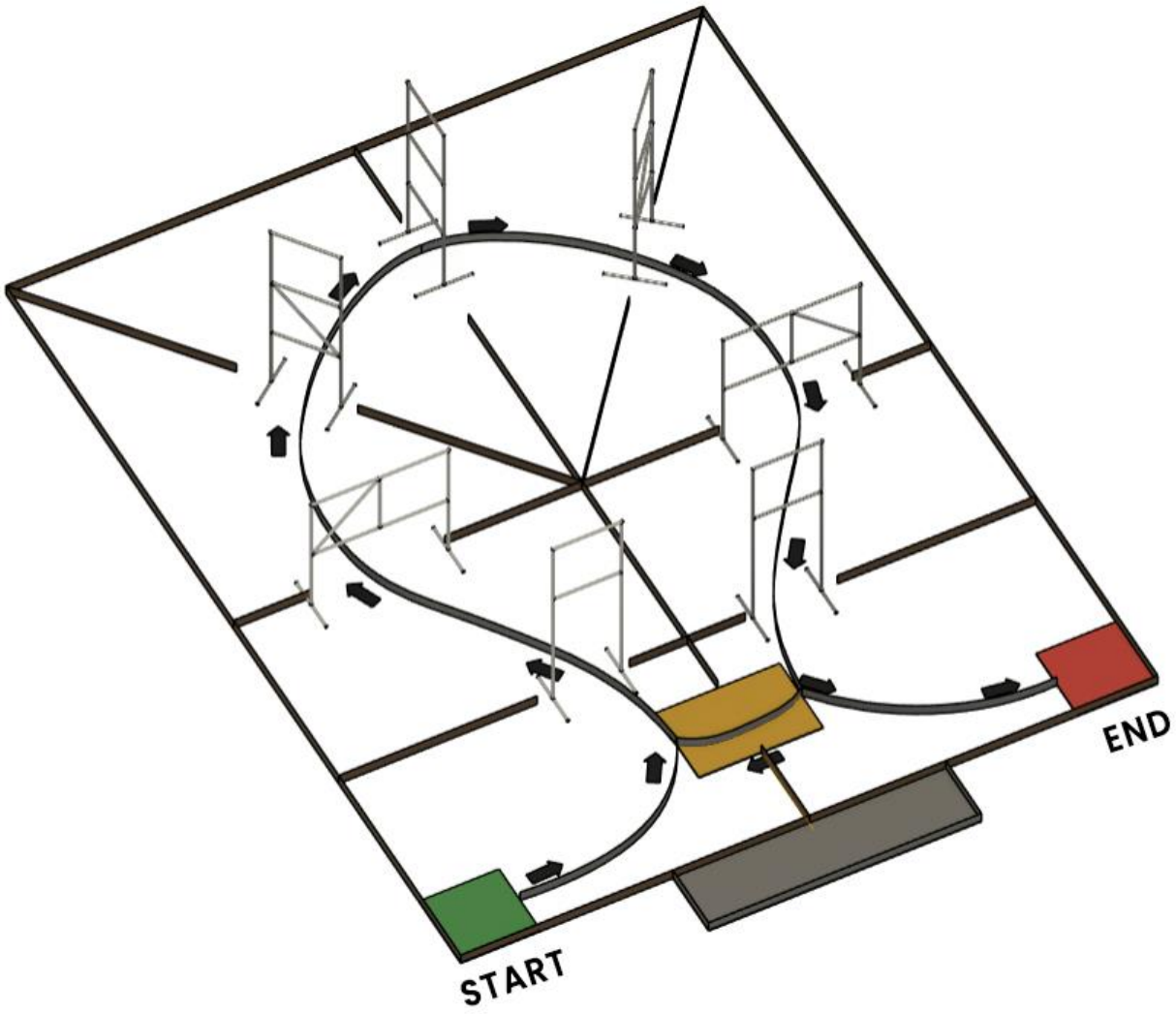
Lap Completion:

- Teams with 2 members will complete 2 laps with the same pilot and co-pilot. Teams with 4 members will switch the pilot and co-pilot for the 2nd lap.

Performance Judging:

- Teams are evaluated based on their precision, skill in navigating obstacles, and completion time. Faster and more accurate teams will score higher.
- Judges' decisions are final, and any violations of the rules will lead to immediate disqualification.

Sample Arena:



Note: The arena shown in the image is for reference purposes only and serves as a sample. The actual arena at the competition may have some modifications.